

BASEBALL & SOFTBALL

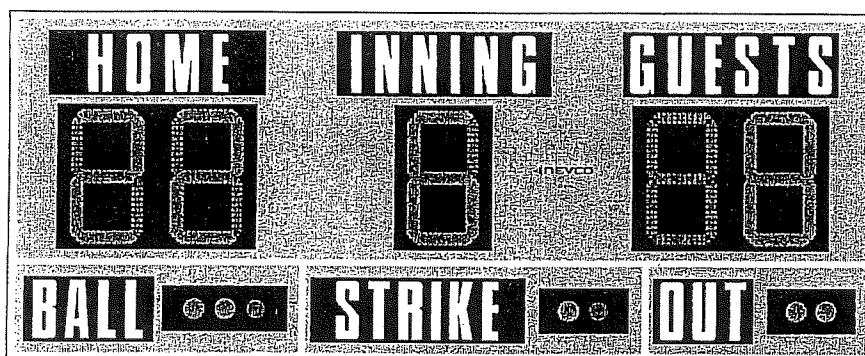
SCOREBOARDS

MODEL 1510

Size: 10' x 4' x 8" (3.05 x 1.22 x .20 meters)

Approximate hanging weight: 115 lbs. (52 kg)

Digit Size: 18" **Digit Color:** High Intensity Red or Amber



Small scoreboard designed for combination Baseball/Softball facilities.

- Operate wired or wireless.
- Bright, long lasting, energy efficient LEDs.
- Large digits easily seen from long distances.
- Large LED indicators display number of Balls, Strikes and Outs.
- White outline striping separates features for greatest readability.
- Includes changeable Baseball/Softball caption plates.

INTEGRATED DISPLAY AND SCORING SOLUTIONS



Model 1510 (Outdoor) Baseball/Softball Scoreboard

SCOREBOARD/CONTROL OPERATING FEATURES

MODEL 1510	MPC WIRED	MPCW WIRELESS	MPCX WIRELESS Not available with ETNs
TEAM SCORES 18" High Intensity Red or Amber LED Digits	Displays 0-99.	Displays 0-99.	Displays 0-99.
INNING 18" High Intensity Red or Amber LED Digits	Displays 0-9.	Displays 0-9.	Displays 0-9.
INDICATORS 2" diameter High Intensity Red or Amber LED cluster	Three for ball. Two for strike. Two for Out.	Three for ball. Two for strike. Two for Out.	Three for ball. Two for strike. Two for Out.
JUNCTION BOX	One (1) 4" x 2 1/8" x 2 1/8" with cover to be installed in dry location (press box) furnished.	N/A	N/A
CONTROL CABLE	One (1) length required of 2-WIRE (coaxial type) 3/4" diameter. Order length required.	N/A	N/A

In addition to the standard 15 colors, Nevco can match any PMS color. Please contact your local Display and Scoring Consultant for pricing information.

#103 Cardinal Red	#73 Maroon	#102 Team Orange	#99 Golden Yellow	#142 Kelly Green	#74 Forest Green	#120 Teal Blue	#72 Electronic Blue	#140 Royal Blue	#121 Midnight Blue	#141 Navy Blue	#104 Medium Purple	#70 Desert Gray	#95 Silver Gray	#76 Print Black
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AGENCY APPROVAL: UL/CUL listed, FCC, CE, INDUSTRY CANADA.

SCOREBOARD: Size 10'L x 4'H x 8"D (3.05 x 1.22 x .20 meters), constructed of aluminum. Scoreboard has 1" white outline striping. Four (4) brackets provided for mounting. Hanging weight approximately 115 lbs. (52 kg).

CAPTIONS: HOME, GUESTS, INNING, BALL, STRIKE, OUT, white letters 8" high.

LED UNITS: Seven-bar segmented digits with protective aluminum cover.

POWER: 120 VAC, .7 Amps, 50/60 Hz. / 240 VAC, .4 Amps, 50/60 Hz. Requires earth ground.

BUILT-IN LIGHTNING PROTECTION: All models feature fiber-optic isolation circuitry providing additional protection against lightning strikes.

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes: Exterior, electronic, baseball scoreboard[s] including control center and other accessories for complete functional installation.
 - 1. Section 03 30 00 Cast-in-Place Concrete: Concrete footings for posts supporting scoreboards.
 - 2. Section 05 12 00 Structural Steel: Steel posts and other structural framing to support scoreboards.
 - 3. Section 26 05 26 Grounding and Bonding: Grounding of scoreboard and support structure.
 - 4. Section 26 20 00 Low Voltage Electrical Distribution
 - 5. Section 27 41 16 Integrated Audio-Video Systems
 - 6. Section 10 14 63 Electronic Message Signage

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM) Publications:
 - 1. ASTM B221 - Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube.
- B. National Electrical Code.
- C. Federal Communications Commission, Part 15 Rules & Regulations.
- D. UL and C-UL Standard for Electric Signs

1.3 SUBMITTALS

- A. Provide in accordance with Section 01 33 00 - Submittal Procedures:
 - 1. To minimize the environmental impact of multiple paper copies, product installation prints, instructions and diagrams of manufacturer will be submitted in a paperless fashion. The end user shall receive all pertinent hard-copy documentation at delivery.
 - 2. Product data for scoreboards, controls, and accessories shall include descriptions of control functions etc.
 - 3. Installation drawings, face layout, dimensions, construction, electrical wiring diagrams, and method of anchorage. (Paperless when applicable).
 - 4. Copy of guarantee required by Paragraph 1.5 for review by Architect. (Paperless when applicable).
 - 5. Manufacturer's installation instructions. (Paperless when applicable).
 - 6. Finish Samples.

1.4 QUALITY ASSURANCE

- A. Source limitation: All components including scoreboard, control center, control cable, and other accessories and installation hardware shall be products of a single manufacturer.
- B. Manufacturer qualifications: Company specializing in manufacturing electronic scoreboards with 10 years minimum successful world-wide experience.
- C. Scoreboards shall be designed for exterior installation with weatherproof housing and fiber optic interface to reduce potential damage from electrical storms.

- D. Should service be necessary, specialized personnel shall not be required. Modular "plug and play" components will be housed in an internal protective enclosure.
- E. Scoreboards and other electrical components shall be certified for use in United States and Canada by Underwriter Laboratories, (UL) Inc. and shall bear either UL or C-UL label only.
- F. Scoreboards and other electrical components shall be electrically grounded in accordance with National Electrical Code (NEC), Article 600.

1.5 GUARANTEE

- A. Provide under provisions of Section 01 78 00 - Closeout Submittals: Guarantee to cover defects in materials and workmanship.
 - 1. 5 years parts and factory labor guarantee for scoreboards, [wired controls,] and accessories from invoice date.
 - 2. 2 years part and factory labor guarantee for wireless controls and receivers from invoice date.
 - 3. Lifetime telephone support.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Nevco, 301 East Harris Avenue, Greenville, Illinois 62246; 800-851-4040; www.nevco.com.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 25 00 - Product Substitution Procedures.

2.2 MATERIALS

- A. Aluminum faces and perimeter frame: Fabricated from .050 minimum thickness, ASTM B221 aluminum sheet with reinforcement and slotted mounting brackets top and bottom.
- B. Finish: Acrylic polyurethane paint. Color as selected by Architect from manufacturer's standard range. [Color to be [No. 70 - Desert Tan] [No. 72 - Electronic Blue] [No. 73 - Maroon] [No. 74 - Forest Green] [No. 76 - Print Black] [No. 95 - Silver Gray] [No. 99 - Golden Yellow] [No. 102 - Team Orange] [No. 103 - Cardinal Red] [No. 104 - Medium Purple] [No. 120 - Teal Blue] [No. 121 - Midnight Blue] [No. 140 - Royal Blue] [No. 141 - Navy Blue] [No. 142 - Kelly Green] as provided by Nevco.] [PMS Color No. _____]
 - 1. Provide [white] [specify alternate color] striping to separate scoreboard features.
- C. Brackets: S and J brackets fabricated from [5/16 inch] [8 mm] minimum thickness steel plate for support and attachment of scoreboards to support framing.
- D. Fasteners, anchors, and other exposed hardware: Corrosion resistant.
- E. Electronics: Low voltage, solid state, 2-wire cable, multiplex system, quartz crystal controlled.
- F. Provide gold plated electrical contacts on interconnecting wiring to reduce corrosion and improve reliability.
- G. Provide fiber optic communication interface to reduce threat of damage from electrical storms and ESD.
- H. LED (light emitting diode) units: Seven-bar, segmented digits with protective aluminum cover, rated typical life 100,000 hours and be designed to provide excellent visibility from all angles and sides.
- I. Junction boxes where required: Sheet metal box and cover, [4-1/2 x 2-1/8 x 2-1/8 inches] [114 x 54 x 54 mm] min. complying with NEMA standards.
- J. Control cable: UL listed, 2-wire, RG-58/U, coaxial cable, [1/4 inch] [6 mm] diameter.

2.3 SCOREBOARDS

- A. Type: Exterior, electronic baseball scoreboard with LED displays for inning and scores and LED indicators for balls, strikes, and outs; Model 1510 as manufactured by Nevco.

1. Size: [10 feet long x 4 feet high x 8 inches deep.] [3.1 m long x 1.2 m high x 203 mm deep.]
2. Approximate weight: [115 pounds] [52 kg].
3. White on black captions: [8 inches] [203 mm] high "HOME", "GUESTS", "INNING", "BALL", "STRIKE", and "OUT".
4. High Intensity Red LED displays, [18 inches] [457 mm] high digits: Inning and team scores.
5. High Intensity Red LED circular indicators: 3 for balls, 2 for strikes, and 2 for outs.
6. Power requirement: 96 Watts MAX 100-240 volts, 50/60 Hz Requires earth ground.

2.4 ACCESSORIES

- A. Provide each scoreboard or accessory with control cable of length required. Electrical junction boxes, conduits, mounting hardware, and other accessories as required for installation are to be provided by others.
- B. Additional available accessories include but are not limited to; please specify if required.
 1. Protective Nets.
 2. Team Name caption plate to replace "Home"
 3. Nevco "A", "AD", or "ADL" signs including Artwork.
 4. Nevco 9505 Time display.
 5. Nevco Locker Room Clocks.
 6. Nevco Full Color, Red or Amber Message Centers.
 7. Nevco Video Displays.

2.5 CONTROL CENTER

- A. **Type: Wired**, microprocessor based operator's control center designed to operate different models of scoreboard by interchange of keyboard overlay; Model MPC as manufactured by Nevco. Console will operate earlier scoreboards from Nevco.
 1. Console: High impact, break-resistant gray plastic [11 x 9-1/2 x 4-1/8 inches] [279 x 241 x 105 mm].
 2. Features:
 - a. Provide with LED displays, lithium cell battery backup to maintain scoreboard memory and time of day, self test mode, power on-off switch, alternate time control, and multiple scoreboard operation.
 - b. Split and raised 40 key keyboard, internal beeper acknowledging each entry, and bookmark capabilities.
 - c. Keyboard overlays for scoreboard or accessory.
 - d. Remote hand-held main time switch with integral horn button.
 - e. [25 feet] [7.6 m] control cable with connectors.
 - f. Timer features: Time of day display, multiple time out timers with warning, interval horn, up-count auto stop with horn, and 1/10th second display during last minute.
 - g. Dimmer control for scoreboard.
 3. Power requirements: 120 volts, 12 watts, 50/60 Hz.
 4. Provide option of battery supply for control operation if utility power not available.
 5. Provide carrying case for control center, cable, and hand-held switch; Model CC-3 as manufactured by Nevco.
 - a. Size: [18-1/2 x 14-1/2 x 6 inches] [470 x 368 x 152 mm].
 - b. Construction: Double wall, high density black polyethylene with padded interior, mechanical latches, and hinges.
- B. **Type: Wireless**, microprocessor based, operator's control center with receiver unit mounted at scoreboard and designed to operate different models of scoreboard by interchange of keyboard overlay; Model MPCW as manufactured by Nevco. Console will operate earlier scoreboards from Nevco.
 1. Unit shall comply with Part 15 of FCC Rules regarding interference.

2. Console: High impact, break-resistant gray plastic [11 x 9-1/2 x 4-1/8 inches] [279 x 241 x 105 mm].
 3. Features:
 - a. Control can be used to operate both wireless and wired scoreboards.
 - b. Power on-off switch.
 - c. Split and raised 40 key keyboards, internal beeper acknowledging each entry, and bookmark capabilities.
 - d. Keyboard overlays for scoreboard or accessory.
 - e. Remote hand-held main time switch with integral horn button.
 - f. Provide with LED displays, lithium cell battery backup to maintain scoreboard memory and time of day, self test mode, power on-off switch, alternate time control, and multiple scoreboard operation.
 - g. Timer features: Time of day display, multiple time out timers with warning, interval horn, up count auto stop with horn, and 1/10th second display during last minute.
 - h. Dimmer control for scoreboard.
 4. Receiver: Aluminum construction, [6-1/8 x 3 x 1-3/8 inches] [116 x 76 x 35 mm] with [4 inches] [102 mm] antenna and mounted at scoreboard.
 5. Maximum range: [1,000 feet] [305 m] from control center to receiver.
 6. Power adapters: Provide for each control center and receiver.
 - a. Input: 120 volts, 0.4 amps, 50/60 Hz.
 - b. Output: 9 volts, 1.67 amps, 15 watts.
 7. Provide option of battery supply for control operation if utility power not available.
 8. Provide carrying case for control center and hand-held switch; Model CC-3 as manufactured by Nevco.
 - a. Size: [18-1/2 x 14-1/2 x 6 inches] [470 x 368 x 152 mm].
 - b. Construction: Double wall, high density black polyethylene with padded interior, mechanical latches, and hinges.
 9. Provide suitable, RF transparent, NEMA 4 enclosure for receiver, to be located upon scoreboard supporting structure per installation diagrams.
- C. **Type: Handheld** wireless, basic, AA battery operated, sport specific, control center with receiver unit mounted at scoreboard; Model MPCX as manufactured by Nevco. Control will have operability with earlier scoreboards from Nevco.
1. Unit shall comply with Part 15 of FCC Rules and Regulations.
 2. Control unit: High impact, break-resistant black ABS plastic Size: 3-1/4" x 5-1/2" x 7/8" [80 x 140 x 20 mm].
 3. Features:
 - a. Wireless operation within [1000 feet] [305 m].
 - b. Operate multiple scoreboards simultaneously.
 - c. System allows multiple controllers to link to individual scoreboards.
 - d. High visibility LCD display with a sealed keyboard.
 - e. Long battery life with indicator; include two AA batteries.
 - f. Single hand operation with a no slip grip.
 - g. Built-in belt clip.
 - h. Wireless signal strength meter and internal antenna.
 4. Receiver: Injection molded case, [5-1/2 by 3-3/4 by 2 inches] [140 by 95 by 51 mm] mounted at scoreboard.
 5. Maximum range: [1,000 feet] [305 m] from control center to receiver.
 6. Power adapters: Provide for each scoreboard receiver.
 - a. Input: 120 volts, 0.4 amps, 50/60 Hz.
 - b. Output: 9 volts, 1.67 amps, 15 watts.
 7. Provide carrying case for up to two control centers, Model CC-4 as manufactured by Nevco.
 - a. Size: [18-1/2 x 14-1/2 x 6 inches] [470 x 368 x 152 mm].

- b. Construction: Double wall, high density black polyethylene with padded interior, mechanical latches, and hinges.
- 8. Provide suitable, RF transparent, NEMA 4 enclosure for receiver, to be located upon scoreboard supporting structure per installation diagrams.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify exact scoreboard and control center quantities and junction box locations with Architect.
- B. Coordinate requirements for electrical power, concrete, steel erection, auxiliary framing and supports, suspension cables, and other components to be provided under other Specification Sections to ensure adequate provisions are made for complete, functional installation of scoreboards.
- C. Coordinate scoreboard electrical requirements to ensure proper power source, conduit, wiring, and boxes are provided. Prior to installation, verify type and location of power supply.

3.2 INSTALLATION

- A. Install scoreboards and accessories in accordance with manufacturer's instructions and approved installation drawings.
- B. Before installation, field test scoreboards and accessories for operating functions. Ensure that scoreboards accurately perform all operations. Correct deficiencies.
- C. Rigidly mount scoreboards and accessories level and plumb with brackets and fasteners.
- D. Clean exposed surfaces.
- E. Protect scoreboards and finishes from other construction operations.

3.3 DEMONSTRATING AND TRAINING

- A. In accordance with Section 01 75 00 - Starting, Adjusting, and Demonstrating, provide demonstration and training session for Owner's representative covering operation and maintenance of electronic scoreboard.

END OF SECTION